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# The features of compositional form in ordinary averaged architecture

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**Abstract.** The article deals with the features of composition in architectural design for most of cases. On the basis of well known parameters of form there is conducted a comparison with different kinds of visual Arts. There is established that at present time ordinary averaged architecture has definite natural restrictions in form and placement. A value and colour are the elements which have more possibilities for the real architectural practice. They are relatively cheap in comparison to form and placement.

## Introduction

Composition is an undetachable aspect in any of Art. If we are talking about genuine Artwork we can not avoid it. Composition is a specific arrangement of elements, and its main goal is to make us enjoying, to make our "eye" to be pleased. So, all questions according to this theme, which are not considered or considered no full are always in priority. One of such questions is a defining of features for compositional modelling in ordinary ubiquitous architectural practice in comparing with other kinds of visual Art. It needs to be examined because any architect, especially young architect, must fully understand the averaged frames of his or her field of activity at present time and improve his or her skills in required direction.

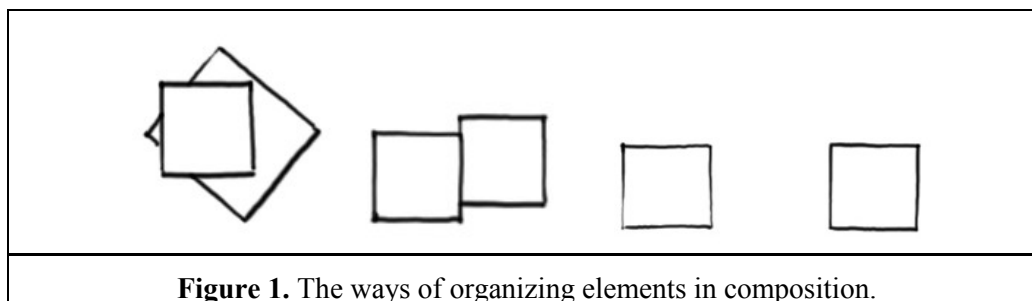
Let us consider shortly main scientific and teaching works related to this theme. There are many researchers, who studied the questions of composition. We can divide their works and them into two main groups. First - works about architectural composition from such authors as: J. Labatut, J. Balmer, K. M. Moffett, P.Sh. Zahidov, V.F. Vavilin, A.V. Ikonnikov, G.P. Stepanov. I.V. Lamtsov, M.A. Turkus, A.V. Stepanov, V.I. Malgin, G.I. Ivanova, V.T. Shimko, A.A. Gavrilina and others. Second - works about composition in other fields of Art and common questions of composition: Alex W. White, I. Itten, W. Wong, W. Crane, T. Samara, E. Lupton, L.P. Dyko, K. Dagldiyan, R. Gravey-Williams, J. Dykinga, N. Ginsburg, J. Muller-Brockmann, J.V. Van Pelt, N.N. Volkov, O.L. Golubeva and others.

The main goal of this research work is to reveal the features of compositional modelling in architecture for most cases of architectural projects. How shall we reveal them? Every visual composition is built by forms. They have basic parameters. Our research work is focused at those well known basic parameters of form with which architect deals every time. They are the foundation of our research and the elements for comparison. They are: placement of compositional elements, form (its character), value and color. Comparing them between each other in architecture, and with them in other Arts, we shall obtain their distinguishable characteristics, and will define the features of composition in architecture. We do not consider the principles, means (instruments) of composition,



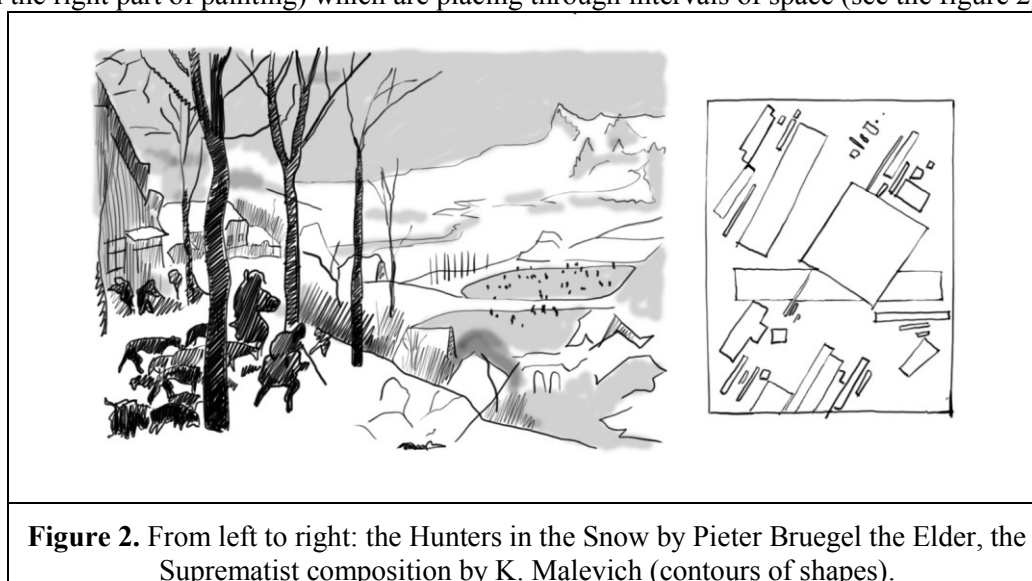
another elements of design, such as symmetry, asymmetry, dissymmetry, hierarchy, rhythm, metre, grid, similarity, layers, nuance, contrast, scale, tectonics, balance, unity, modularity, dominance, plane, described by many authors [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16], because they are not the basis of form. Point, line, texture and pattern are characteristics of form and they are included in this term.

**Placement.** There are three well known methods of placement elements to each other. First – permeation. Permeation is a situation, when one form penetrates another. In flat composition one shape can be imposed upon another shape. Second way – touching of elements. It means, that forms and shapes have common sides and surfaces or parts of them. Third way is – placing with intervals of space. It means that elements are separated by space. All three ways contrast to each other. First two are more similar to each other than third, because in placing through the intervals there is a third element in it – a space. Also the third way has visually more freedom. First two methods for linking figures give more visually embarrassed compositional whole. Look at the figure 1 to see the ways of organizing elements.



**Figure 1.** The ways of organizing elements in composition.

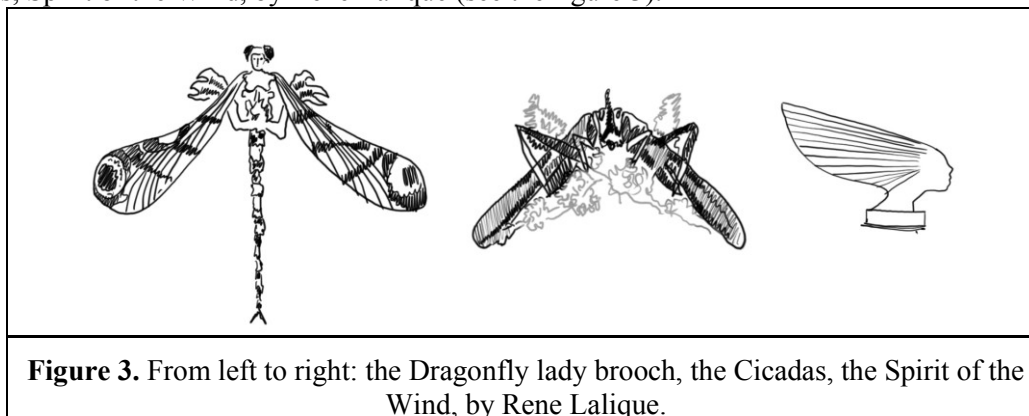
Now let us examine schemes of artworks from different fields of Art. First field is Painting and the chosen works are: *The Hunters in the Snow* by Pieter Bruegel the Elder, the Suprematist composition (contours of shape) by K. Malevich. Our approach is formal analysis. Looking at this painting one should notice that there are applied all three methods for placing elements. The permeation dominates other methods. Many shapes in this painting penetrates each other. There are also some examples of sides touching. The third method is presented, for instance, in some of dark dots (people at the frozen pool in the right part of painting) which are placing through intervals of space (see the figure 2).



**Figure 2.** From left to right: the Hunters in the Snow by Pieter Bruegel the Elder, the Suprematist composition by K. Malevich (contours of shapes).

The next painting is suprematist composition by K. Malevich. It is entirely abstract painting. Analyzing this painting one should notice that there are also used all three methods of elements interacting. For example, left top part consists of green, dark and yellow rectangles. They are placed through the space intervals. The bottom elements are touching each other with edges. The central part demonstrates well the method of penetration, particularly imposing elements. Overall the composition looks visually free (see the figure 2).

Let us shortly examine the instances of jewelry, and they are: a famous Dragonfly lady brooch, Cicadas, Spirit of the Wind, by Rene Lalique (see the figure 3).



**Figure 3.** From left to right: the Dragonfly lady brooch, the Cicadas, the Spirit of the Wind, by Rene Lalique.

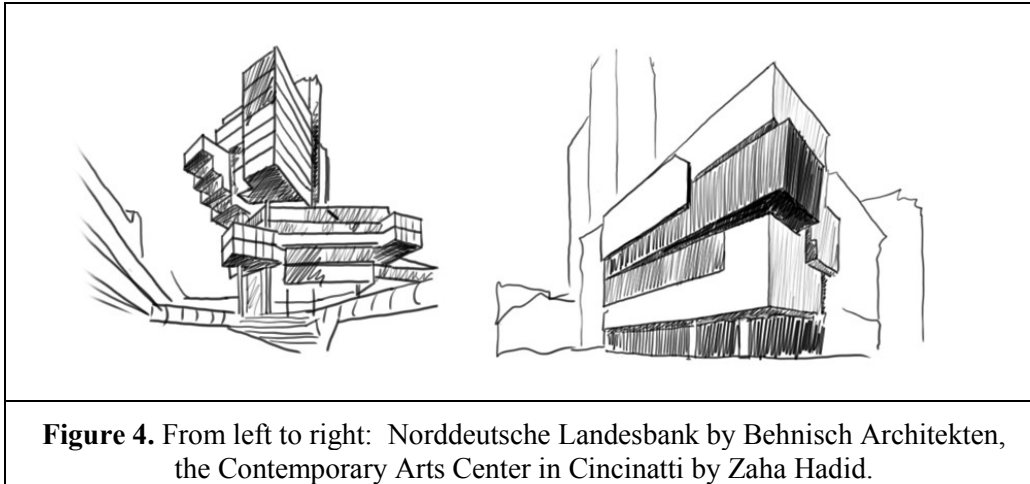
One can notice that there are touching and permeation of elements. There is no placement via intervals in these examples because all jewelry artworks have specific construction. The same occurs for industrial design, mosaics, fashion design and all Arts having construction. There were examined by author different artworks from different fields of Art.

Now let us analyze the examples of architectural composition. Everyone knows that contemporary architecture (XX-XXI centuries) greatly differs from architecture of previous centuries (Ancient World, Middle Ages and so on). Today's buildings have more free composition. They may have different volumetric, decorative elements which are outstanding from the building, different colors and other aspects. It is also well known that most of public buildings have more various composition than residential buildings. They have more glass, more unusual forms, colors, another solutions. And if it is so, we will focus two public buildings of contemporary architecture for making our analysis of composition more equitable. It is necessary to establish the level of consideration. There are several levels: the level of master plan of the city, the level of region (neighborhood), the level of group of buildings (complex). There is also the level of single building and it will be considered by us.

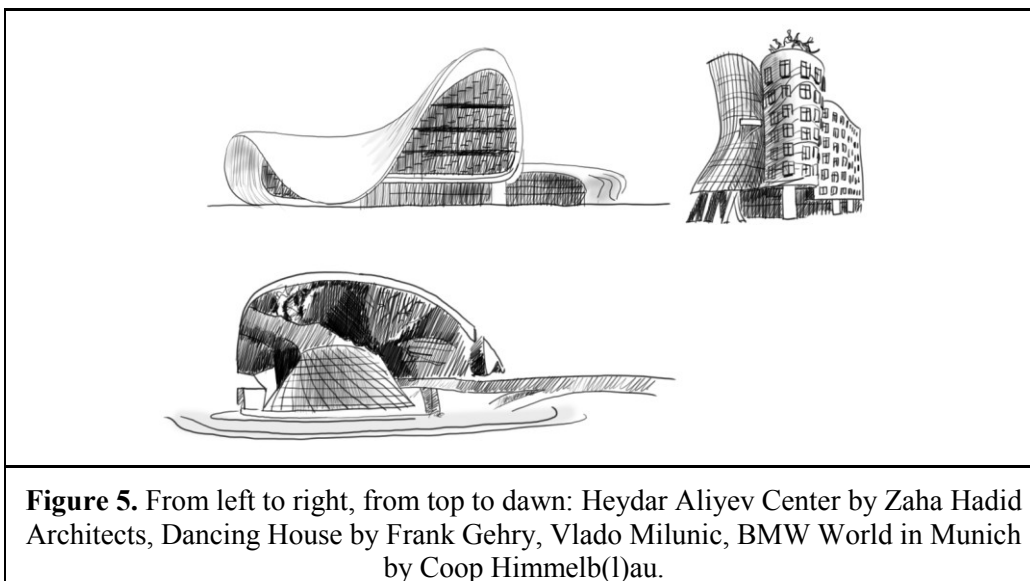
First example is Norddeutsche Landesbank by Behnisch Architekten, located in Hannover. The building volume is faced of glass and has an interesting form. Its composition has two main parts: one – a horizontally stretched volume, and two – a vertical "superstructure". The building has a visual image of aircraft carrier. The architectural compositional solution includes touching and penetrating elements and looks very free for building (see the figure 4).

Next instance is the Contemporary Arts Center in Cincinnati by Zaha Hadid. The volume has several visually distinguished parts. They all penetrate and touch each other (see the figure 4). Besides two examined instances there were analyzed many architectural compositions of different famous buildings. The result overall is the same as in two described above.

One must conclude that in architectural volume-spatial compositions there is a using of touching and permeation in most cases as it is in all Arts with construction. The placing through intervals is rarely applied at the level of single building, but it happens in complexes of buildings and in cases of town planning – at the level of master plan of town or city (different buildings – residential, industrial, public arranged via intervals of space).



**Form.** It is clear that today's building may have any form. There are many examples of it: Harbin Opera House by Mad Architects, Heydar Aliyev Center by Zaha Hadid Architects, Dancing House by Frank Gehry, Vlado Milunic, BMW World in Munich by Coop Himmelb(l)au, Graz Art Museum in Graz, Austria by Colin Fournier, Peter Cook, and so on. There are several of them showed at the figure 5.



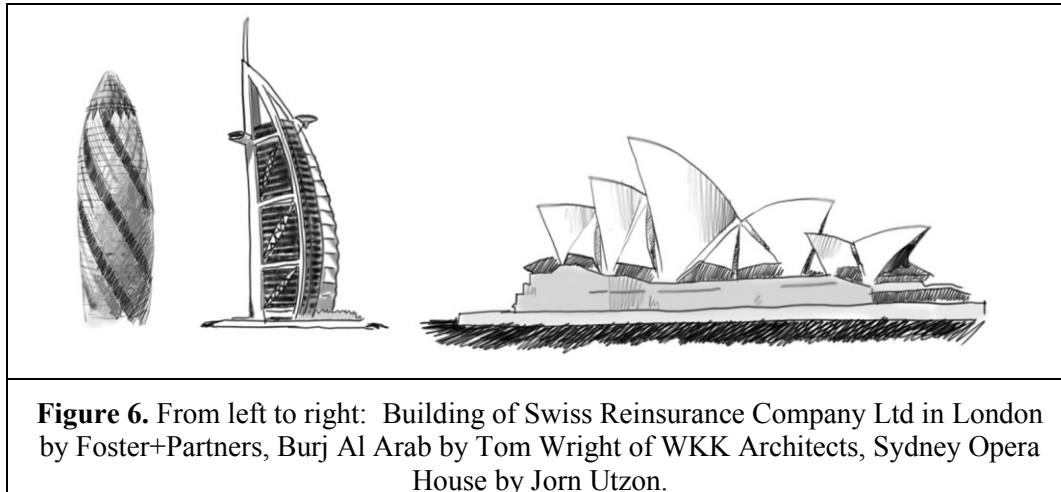
However averaged building forms repeat the rectangular prism of any kind, rarely cylinder, cone and other forms. It is said not only about buildings which are made already, but also about new buildings which are designing for now and will be designed in future. This means that most of architects are forced more to work with fenestration of standard vertical wall. They generally need to organize entrance, shapes of windows, forms of balconies and their placement on it. It does not mean that there can not be complicated form. It will appear if the client wants it and has money for it, but the truth is, it is a rare case. The straight wall can be built more easily than a curvilinear, and it is more cheap.

There is another aspect of any façade – facing. Any ordinary wall can be faced by façade system, which gives texture or pattern. And this is the relatively cheap way to give individuality to the building.

Let us take a look to another kinds of Art. In painting, drawing, mosaic, photography, graphic design there is used all the range of shapes. Jewelry art, industrial design, sculpture, fashion design,

ceramics and similar to them have also the wide range of the forms, but their forms depend upon gravity and construction, as in architecture.

**Value.** A value is an important means for compositional modelling in architecture. Alongside with colour it is a cheap medium, and its contribution within final result can be considerable. In real practice architect can apply all the range of value (from black to white). Let us call several examples, in which value is actively used: Building of Swiss Reinsurance Company Ltd in London by Foster+Partners, Burj Al Arab by Tom Wright of WKK Architects, Sydney Opera House by Jorn Utzon (see figure 6).



This is an often applied means for developing the architectural form and it can be brilliantly used by architect. A value is also often applied in any other kinds of visual Art.

**Colour.** A colour has the same characteristics as value, but more wider range. It is clear that there are many different colors human eye can distinguish. It is rare for architectural form to use big areas of bright colors. And it is usually colors are muted. However, color has great power in architectural composition. It can give difference which makes building beautiful. For example: The Academie MWD Dilbeek in Belgium by Carlos Arroyo Architects, Sharp Center for Design by Robby/Young+Wright Architects and Alsop Architects. There is no need to say that all the range of colour is widely applied in all kinds of Arts. It is also clear that there is a possibility of combination color and value in architectural solutions.

One must conclude, that architectural composition has its specifics. There are reasons depending upon Nature and Human. The reasons of Nature are gravity, rain, snow and others, which also impacts on architectural form. The reasons of Human are the following. It is clear, that form of the building can be very unusual and it can be placed different ways, but these parameters depend upon money possibilities in real practice. And there are small number of buildings relatively to all buildings, which have very unusual such characteristics. Most of buildings for today have a form of simple compact rectangular prisms, cylinders, forms near them (especially high-rise buildings). A permeation and touching are the main methods of placement. And it means that most of architects must deal with this. One reason is often a need to make the building energy efficient and the final solution becomes a compact building. Another reason is also the lacking of material and construction technologies, technologies of building erection, engineering communications technologies and others, which could make the cost low with the same or better quality. If it will be solved, architects will use all the range of forms more often.

Until it is not done, most of architects have to apply simple cheap solutions in ordinary practice. They more often use value, colour, texture, pattern for making architectural composition beautiful. These means are relatively cheap and have a great visual power.

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